



# MacBook Pro 13" Retina Display Late 2012

## Right Fan Replacement

Replace the Right Fan in your MacBook Pro 13" Retina Display Late 2012.

Written By: Walter Galan



## INTRODUCTION

Use this guide to replace the right fan.



### TOOLS:

- [MacBook Pro and Air 5-Point Pentalobe Screwdriver](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [iFixit Opening Tools](#) (1)
- [Spudger](#) (1)
- [T5 Torx Screwdriver](#) (1)
- [T6 Torx Screwdriver](#) (1)
- [T7 Torx Screwdriver](#) (1)
- [Tweezers](#) (1)



### PARTS:

- [MacBook Pro 13" Retina Right Fan](#) (1)

## Step 1 — Lower Case



- Remove the following ten screws securing the lower case to the upper case:
  - Two 2.3 mm P5 Pentalobe screws
  - Eight 3.0 mm P5 Pentalobe screws

## Step 2





- Wedge your fingers between the upper case and the lower case.
- Gently pull the lower case away from the upper case.
- Remove the lower case and set it aside.



## Step 3



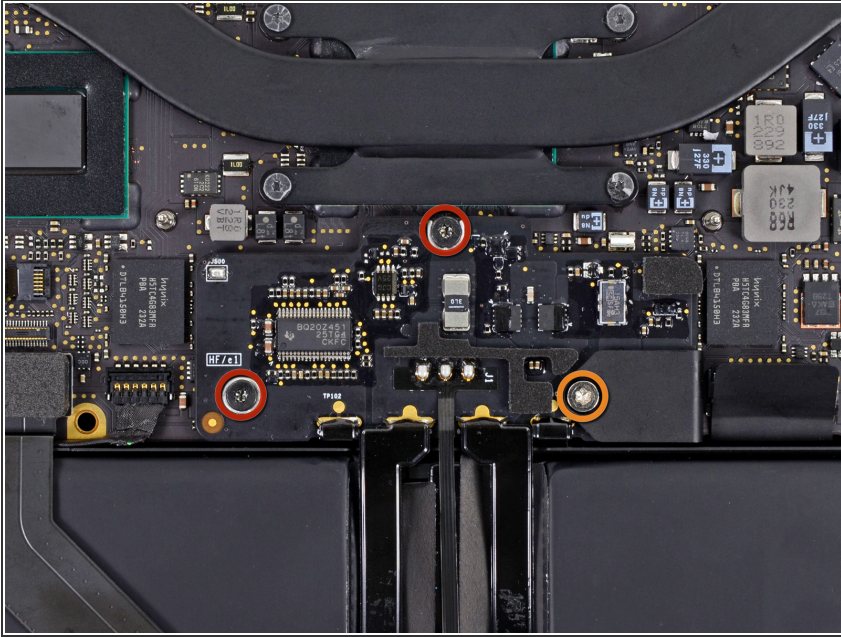
-  The lower case is connected to the upper case at the center, with two plastic clips.
-  During reassembly, gently push down the center of the lower case to reattach the two plastic clips.

## Step 4 — Battery Connector



- Remove the plastic cover adhered to the battery contact board.

## Step 5



- Remove the following screws securing the battery connector board to the logic board:
  - Two 2.8 mm T6 Torx screws
  - One 7.0 mm T6 Torx shouldered screw

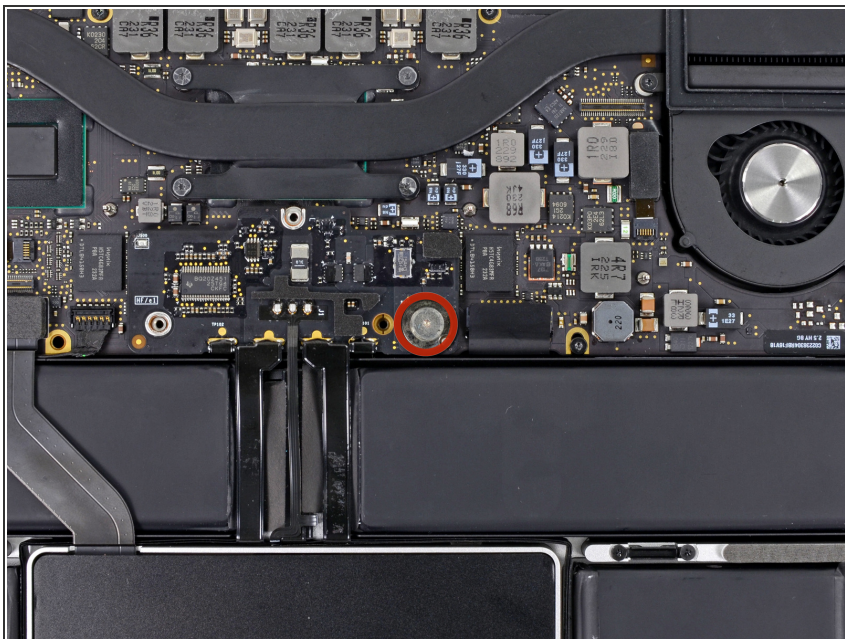
## Step 6



- Use tweezers to remove the small plastic cover located near the bottom right of the battery connector board.



## Step 7



- Remove the wide head 6.4 mm T6 Torx screw securing the battery connector to the logic board assembly.

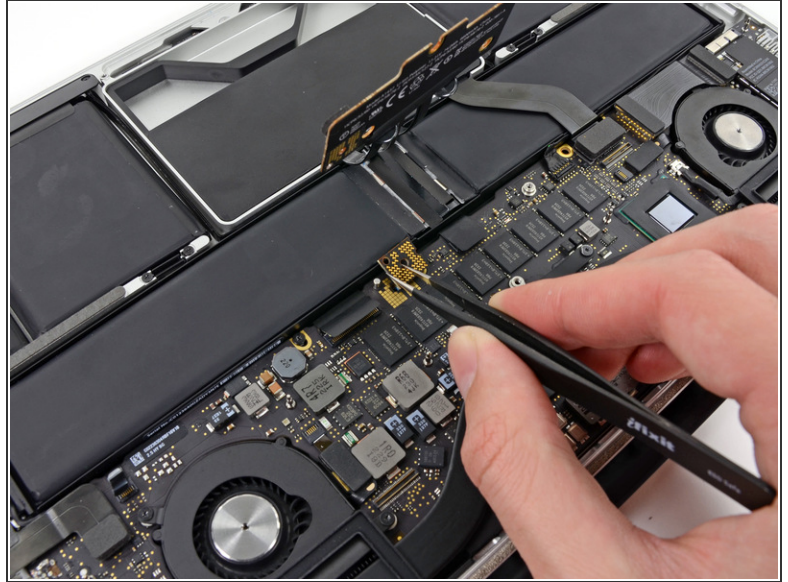
## Step 8



- Carefully lift the battery connector board up off the logic board.
- It is recommended to bend the battery cables just slightly, to keep the board suspended up above the logic board and out of the way.

⚠ Do not fold the board completely over, or crease the cables, as this may damage the battery.

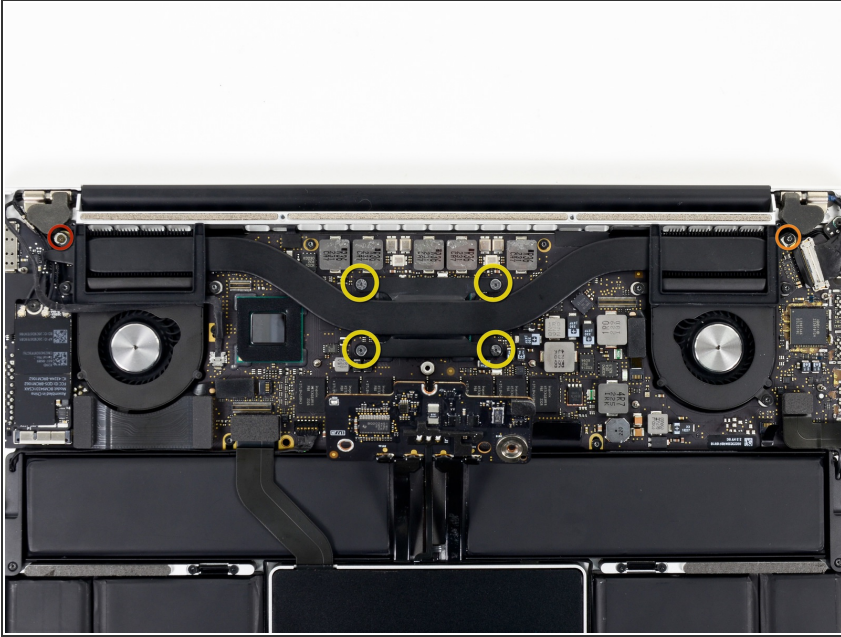
## Step 9 — Battery Contact Board



- Grasp the Interposer with tweezers.
  - ❗ An interposer is the name for an interface that links one electrical connection to another. In this repair, it is the board connecting the battery to logic board.
- Lift the Interposer off the logic board and remove it.
  - ⚠ Removing this board will ensure that the battery remains disconnected throughout your repair, preventing your computer from accidentally powering on. It's also a good idea to take it out so it doesn't fall out unexpectedly.

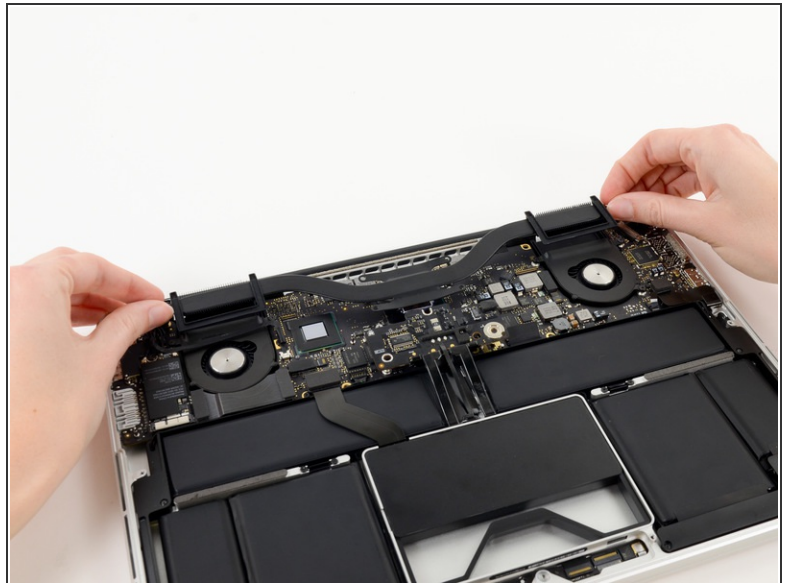
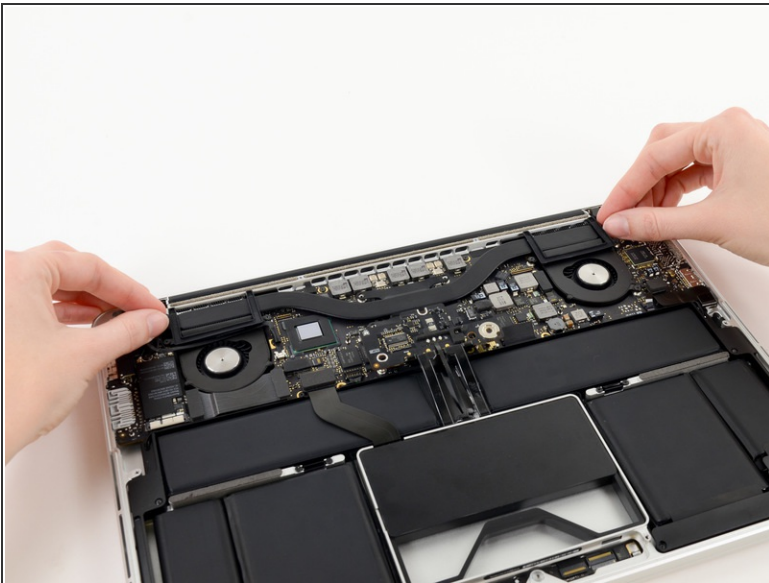


## Step 10 — Heat Sink Assembly



- Remove the following screws securing the heat sink to the logic board assembly:
  - One 2.4 mm Phillips #00 screw
  - One 3.4 mm T5 Torx screw
  - Four 2.7 mm T5 Torx screws

## Step 11



- Lift and remove the heat sink up off the logic board assembly.


⚠ When reinstalling the heat sink, be sure to apply a new layer of [thermal paste](#). If you have never applied thermal paste before, we have a [guide](#) that makes it easy.



## Step 12 — I/O Board Data Cable



- Use the flat end of a spudger to pry the right side of the I/O board data cable connector up off its socket on the I/O board.

 When prying the I/O board data cable connector from its socket, make sure to pry the connector itself and **not** the socket. Prying the socket may cause irreversible damage to the I/O board.

## Step 13



- Wedge the flat end of a spudger beneath the left side of the I/O board data cable connector.
- Gently twist the spudger to disconnect the I/O board data cable connector from its socket on the logic board.

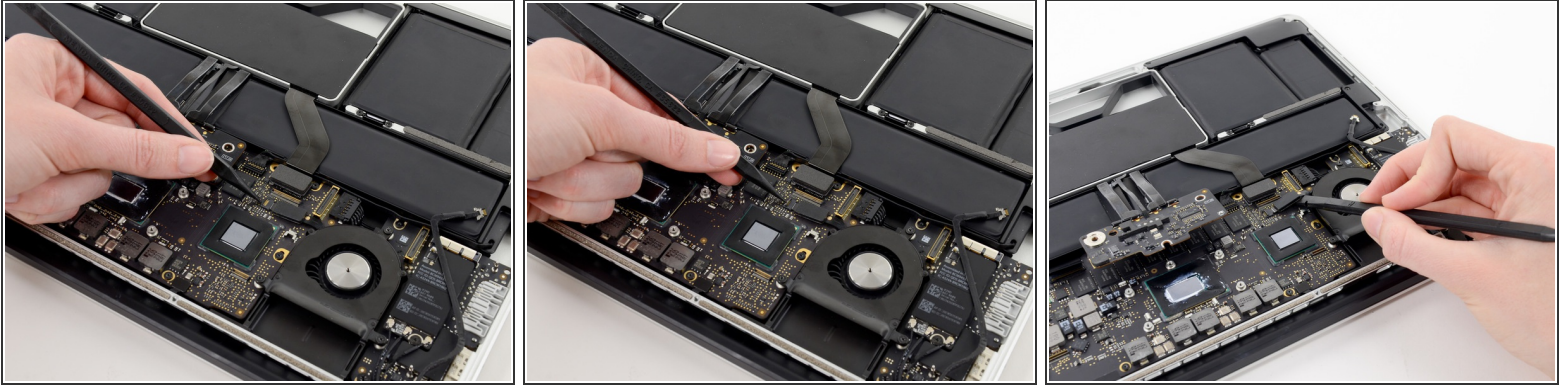
## Step 14



- Lift and remove the I/O board data cable from the MacBook Pro.



## Step 15 — Right Fan



- Use the tip of a spudger to flip up the retaining flap on the right fan ribbon cable ZIF socket.

⚠ Be sure you are prying up on the hinged retaining flap, **not** the socket itself.

- Pull the right fan ribbon cable straight out of its socket on the logic board.

## Step 16



- Remove the three 3.1 mm T5 Torx screws securing the right fan to the logic board assembly.

## Step 17



- Lift and remove the right fan out of the upper case.

To reassemble your device, follow these instructions in reverse order.

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